

## In the Claims

- 1 1. (Amended) A method of communicating over a plurality of different target media,  
2 comprising:
  - 3 providing, for each of the plurality of different target ~~busses~~media, a plurality of  
4 communication element types, each communication element type being a user-definable  
5 data structure structured to that pertains to represent a particular protocol layer a-of the  
6 respective target ~~communication~~ medium,  
7 wherein at least one of the plurality of communication element types is included  
8 by reference in greater than one other of the plurality of communication element types.
- 1 2. (Original) A method as recited in claim 1, wherein instances of each communication  
2 element type can be created for exchanging data on the respective target medium.
- 1 3. (Original) A method as recited in claim 1, further comprising defining the plurality of  
2 communication element types responsive to exchanges allowed by the protocol of the  
3 respective target medium.
- 1 4. (Original) A method as recited in claim 1, further comprising:
  - 2 creating an instance of at least one of the plurality of communication element  
3 types; and
  - 4 processing the instance of the communication element type for exchanging  
5 information on the respective target medium.
- 1 5. (Original) A method as recited in claim 1, wherein the communication element type  
2 defines a structure for transmitting data over the target medium.
- 1 6. (Original) A method as recited in claim 1, wherein the communication element type  
2 defines a structure for receiving data over the target medium.

- 1 7. (Original) A method as recited in claim 1, wherein at least one communication  
2 element type is a message type that includes a portion for holding message data  
3 associated with instances of the respective message type.
- 1 8. (Original) A method as recited in claim 7, wherein the message data has a fixed  
2 length.
- 1 9. (Original) A method as recited in claim 7, wherein the message data has a variable  
2 length.
- 1 10. (Original) A method as recited in claim 1, wherein the communication element type  
2 has a fixed portion that is the same for all instances of the communication element type.
- 1 11. (Original) A method as recited in claim 1, wherein any communication element type  
2 can be defined in terms of other communication element types.
- 1 12. (Original) A method as recited in claim 1, wherein the plurality of communication  
2 element types includes at least one message type, and each instance of the message type  
3 includes a portion for prescribing timing.
- 1 13. (Original) A method as recited in claim 12 wherein the timing includes a setting for  
2 specifying a pre-message gap.
- 1 14. (Original) A method as recited in claim 12, wherein the timing includes a setting for  
2 specifying a pre-word gap.
- 1 15. (Original) A method as recited in claim 12, wherein the timing includes a setting for  
2 specifying a begin message timeout.

1 16. (Original) A method as recited in claim 12, wherein the timing includes a setting for  
2 specifying a trailing gap.

1 17. (Amended) A method of structuring communications over a communication  
2 medium having a known protocol, comprising:

3 providing at least one user-definable communication element type for at least one  
4 layer of a generalized communication model, each communication element type having a  
5 user-definable structure that is adaptable for representing pertains to a corresponding  
6 layer of the protocol;

7 creating an instance of the at least one user-definable communication element  
8 type; and

9 varying at least one characteristic of the instance to determine a susceptibility of  
10 equipment operatively connected to the target medium to the varied characteristic.

1 18. (Amended) A method as recited in claim 17, wherein the at least one  
2 characteristic includes a timing characteristics~~specific instances of the communication~~  
3 ~~element types can be created for representing transactions over the medium.~~

1 19. (Amended) A method of creating an interface with a communication medium  
2 having a protocol, comprising:

3 ~~creating at least one a plurality of~~ creating at least one a plurality of user-definable communication element types for  
4 representing different at least one layers of a generalized communication model, wherein  
5 at least one of the plurality of communication element types is included by reference in  
6 greater than one other of the plurality of communication element types;

7 ~~structuring each at least one user-definable communication element type to~~  
8 ~~substantially represent the protocol of the medium at the respective layer of the~~  
9 ~~generalized communication model; and~~

10 saving the at least one user-definable communication element type in a computer  
11 readable format that can be accessed for communicating over the medium; and

12 instantiating one or more of the plurality of communication element types to  
13 create specific instances of communications over the communication medium.

1    20. (New)     A method as recited in claim 1,  
2                wherein the plurality of user-definable communication element types include  
3    message types, word types, and field types,  
4                wherein at least one message type includes a reference to at least one word type,  
5    and  
6                wherein at least one word type includes a reference to at least one field type.